

Melick, et al.

Attorney Docket No. P04409US01

Amendments to the Claims

Claim 1 (Currently amended): A method of transmitting data ~~over fiber optic cable~~, the method comprising:
receiving a digital bit of data from a memory unit;
transforming the bit of data into a transmission pulse ~~of light~~, the transmission pulse having a pulse ~~duration~~ characteristic selected from a set of three or more predetermined pulse ~~durations~~ characteristics, one of which is corresponding to the bit of data; and
transmitting the transmission pulse over ~~fiber optic cable~~ a guided medium.

Claim 2 (Currently amended): The method of claim 1 wherein the pulse ~~durations~~ characteristics correspond to numbers 0 through 9.

Claim 3 (Original): The method of claim 1 wherein the data is in the form of universal character encoding.

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Claim 4 (Currently amended): The method of claim 1 further comprising:
receiving the transmission pulse from the ~~fiber optic cable~~ guided medium; and
transforming the transmission pulse into a digital bit of data corresponding to the ~~duration~~ characteristics of the transmission pulse.

Claim 5 (Original): A method of transmitting data over fiber optic cable, the method comprising:
receiving a first digital bit of data from a memory unit;
receiving a second digital bit of data from a memory unit;
receiving a third digital bit of data from a memory unit;
transforming the first bit of data into a transmission pulse of light, the transmission pulse having a first pulse duration selected from a set of three or more predetermined pulse durations, one of which is corresponding to the first bit of data;

Melick, et al.

Attorney Docket No. P04409US01

transforming the third bit of data into a transmission pulse of light, the transmission pulse having a third pulse duration selected from a set of three or more predetermined pulse durations, one of which is corresponding to the third bit of data;

determining the transmission time for the second bit of data, the transmission time having a duration selected from a set of three or more predetermined durations, one of which is corresponding to the second bit of data;

transmitting the first transmission pulse over fiber optic cable;

postponing the transmission of the third transmission pulse by a time equal to the transmission time for the second bit of data; and

transmitting the third transmission pulse over fiber optic cable.

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Claim 6 (Original): The method of claim 5 wherein the transmission pulses represent data in the form of universal character coding.

Claim 7 (Original): The method of claim 5 wherein the transmission time represents data in the form of universal character coding.

Claim 8 (Original): The method of claim 5 wherein the transmission time represents data in the form of meta data.

Claim 9 (Original): A method of transmitting data over fiber optic cable, the method comprising:

receiving a digital bit of data from a memory unit;

determining the transmission time for the bit of data, the transmission time having a duration selected from a set of three or more predetermined durations, one of which is corresponding to the bit of data;

transmitting a first constant duration transmission pulse over fiber optic cable;

postponing the transmission of a second constant duration transmission pulse by a time equal to the transmission time for the second bit of data; and

transmitting the second constant duration transmission pulse over fiber optic cable.

Melick, et al.

Attorney Docket No. P04409US01

Claim 10 (Original): A method of transmitting data over radio frequencies, the method comprising:

- receiving a digital bit of data from a memory unit;
- determining the transmission time for the bit of data, the transmission time having a duration selected from a set of three or more predetermined durations, one of which is corresponding to the bit of data;
- transmitting a first constant duration transmission pulse from a discharge antenna;
- postponing the transmission of a second constant duration transmission pulse by a time equal to the transmission time for the second bit of data; and
- transmitting the second constant duration transmission from the discharge antenna.

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Claim 11 (Original): A method of transmitting data from a discharge antenna, the method comprising:

- receiving a first digital bit of data from a memory unit;
- receiving a second digital bit of data from a memory unit;
- receiving a third digital bit of data from a memory unit;
- transforming the first bit of data into a radio transmission pulse, the transmission pulse having a first pulse duration selected from a set of three or more predetermined pulse durations, one of which is corresponding to the first bit of data;
- transforming the third bit of data into a radio transmission pulse, the transmission pulse having a third pulse duration selected from a set of three or more predetermined pulse durations, one of which is corresponding to the third bit of data;
- determining the transmission time for the second bit of data, the transmission time having a duration selected from a set of three or more predetermined durations, one of which is corresponding to the second bit of data;
- transmitting the first transmission pulse from a discharge antenna;
- postponing the transmission of the third transmission pulse by a time equal to the transmission time for the second bit of data; and
- transmitting the third transmission pulse from a discharge antenna.

Melick, et al.

Attorney Docket No. P04409US01

Claim 12 (Original): The method of claim 11 wherein the transmission pulses represent data in the form of universal character coding.

Claim 13 (Original): The method of claim 11 wherein the transmission time represents data in the form of universal character coding.

Claim 14 (Original): The method of claim 11 wherein the transmission time represents data in the form of meta data.

Claim 15 (Original): A system for transmitting data corresponding to variable duration pulses, the system comprising:

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a memory unit on which a bit of data is stored;

a digital/analog converter capable of generating an analog signal corresponding to a variable duration time representing the bit of data, the duration of the variable duration pulse

being selected from a list of three or more predetermined transmission pulse durations;

a trigger generator capable of turning on a switch for a time equal to the variable duration time generating a variable duration pulse; and

a discharge unit transmitting the variable duration pulse across a transmission medium.

Claim 16 (Original): The system of claim 15 wherein the transmission medium is fiber optic cable and the variable duration pulse is a pulse of light.

Claim 17 (Original): The system of claim 15 wherein the transmission medium is air space and the variable duration pulse is a radio signal.

Claim 18 (Original): The system of claim 15 wherein the bit of data is in the form of universal character coding.

Claim 19 (Original): A method of storing data on a fiber optic cable, the method comprising:

Melick, et al.

Attorney Docket No. P04409US01

receiving data in a receiver, the data being in the form of a series of variable duration pulses of light;
transmitting the variable duration pulses from a transmitter over a fiber optic cable;
receiving the variable duration pulses in the receiver; and
repeating the transmission of the variable duration pulses over the fiber optic cable in the direction of the receiver.

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Claim 20 (Original): A method of storing data on an optical storage medium, the method comprising:
receiving a data bit for storage;
determining a duration time corresponding to the data bit, the duration time being selected from a set of three or more duration times,
creating pits in the optical storage medium by operating a recording laser for a time equal to the duration time corresponding to the data bit.

Claim 21 (New): A method of transmitting data, comprising:
receiving at least one digital bit of data from a memory unit;
transforming the at least one digital bit of data into a transmission pulse, the transmission pulse having a pulse characteristic selected from a set of at least three predetermined pulse characteristics, one of which is corresponding to the bits of data;
transmitting the transmission pulse.

Claim 22 (New): The method of claim 21 wherein the transmission pulse is a pulse of light and wherein the step of transmitting is transmitting over fiber optic cable.

Claim 23 (New): The method of claim 21 wherein the transmission pulse is an electronic pulse and wherein the step of transmitting is transmitting over a guided media.

Melick, et al.

Attorney Docket No. P04409US01

Claim 24 (New): The method of claim 21 wherein the pulse characteristics are pulse durations.

Claim 25 (New): The method of claim 21 wherein the pulse characteristics are pulse durations, the transmission pulse is a pulse of light and wherein the step of transmitting is transmitting over fiber optic cable.

Claim 26 (New): The method of claim 21 wherein the pulse characteristic is a pulse position and wherein the transmission pulse is a pulse of light.

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Claim 27 (New): The method of claim 21 wherein the pulse characteristic is a pulse position and wherein the transmission pulse is an electronic pulse and wherein the step of transmitting is transmitting over guided media.

Claim 28 (New): A method of transmitting data with photonic pulses, the method comprising:
receiving digital bits of data from a memory unit;
transforming the bits of data into a transmission pulse of light, the transmission pulse having a pulse position selected from a set of three or more predetermined pulse positions, one of which is corresponding to the bits of data; and
transmitting the transmission pulse over fiber optic cable.

Claim 29 (New): The method of claim 28 wherein the pulse positions correspond to a number base higher than 2.

Claim 30 (New): The method of claim 28 wherein the data is in the form of universal character encoding.

Melick, et al.

Attorney Docket No. P04409US01

Claim 31 (New): The method of claim 28 further comprising:
receiving the transmission pulse from the fiber optic cable; and
transforming the transmission pulse into digital bits of data corresponding to the position of the
transmission pulse.

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Claim 32 (New): A method of transmitting data over fiber optic cable with photonic pulses,
the method comprising:
receiving first digital bits of data from a memory unit;
receiving second digital bits of data from a memory unit;
receiving third digital bits of data from a memory unit;
transforming the first bits of data into a transmission pulse of light, the transmission pulse having
a first pulse position selected from a set of three or more predetermined pulse positions,
one of which is corresponding to the first bits of data;
transforming the third bits of data into a transmission pulse of light, the transmission pulse
having a third pulse position selected from a set of three or more predetermined pulse
positions, one of which is corresponding to the third bits of data;
determining the time of transmission for the second bits of data, the time of transmission having
a duration selected from a set of three or more predetermined durations, one of which is
corresponding to the second bits of data;
transmitting the first transmission pulse over fiber optic cable;
postponing the transmission of the third transmission pulse by a time equal to the transmission
time for the second bits of data; and
transmitting the third transmission pulse over fiber optic cable.

Claim 33 (New): The method of claim 32 wherein the transmission pulse positions
correspond to a number base higher than 2.

Claim 34 (New): / The method of claim 32 wherein the duration between transmission pulses
correspond to a number base higher than 2.

Melick, et al.

Attorney Docket No. P04409US01

Claim 35 (New): The method of claim 32 wherein the transmission pulse positions represent data in the form of universal character coding.

Claim 36 (New): The method of claim 32 wherein the duration between transmission pulses represents data in the form of universal character coding.

Claim 37 (New): The method of claim 32 wherein the duration between transmission pulses represents data in the form of meta data.

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Claim 38 (New): A method of transmitting data with electronic pulses, the method comprising:
receiving digital bits of data from a memory unit;
transforming the bits of data into a transmission pulse of electrical energy, the transmission pulse having a pulse characteristic selected from a set of three or more predetermined pulse characteristics, one of which is corresponding to the bits of data; and
transmitting the transmission pulse over a transmission medium.

Claim 39 (New): The method of claim 38 wherein the transmission pulse characteristics corresponding to the bits of data is the transmission pulses position in time.

Claim 40 (New): The method of claim 38 wherein the transmission pulse characteristics corresponding to the bits of data is the duration between transmission pulses.

Claim 41 (New): The method of claim 38 wherein the transmission pulse characteristics corresponding to the bits of data is the amplitude of the transmission pulse.

Melick, et al.

Attorney Docket No. P04409US01

Claim 42 (New): The method of claim 38 wherein the transmission pulse characteristics corresponding to the bits of data is the duration of the transmission pulse.

Claim 43 (New): The method of claim 38 wherein the transmission pulse characteristics corresponding to the bits of data is the phase of the transmission pulse.

Claim 44 (New): The method of claim 38 wherein the transmission pulse characteristics correspond to a number base higher than 2.

Claim 45 (New): The method of claim 38 wherein the data is in the form of universal character encoding.

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Claim 46 (New): The method of claim 38 further comprising:
receiving the transmission pulse from the transmission medium; and
transforming the transmission pulse into a digital bits of data corresponding to the specific characteristics of the transmission pulse.

Claim 47 (New): A method of transmitting data with electronic pulses, the method comprising:
receiving digital bits of data from a memory unit;
transforming the bits of data into a transmission pulse of electrical energy, the transmission pulse
having a pulse position selected from a set of three or more predetermined pulse positions, one of which is corresponding to the bits of data; and
transmitting the transmission pulse over a transmission medium.

Claim 48 (New): The method of claim 47 wherein the transmission pulse positions correspond to a number base higher than 2.

Claim 49 (New): The method of claim 47 wherein the data is in the form of universal character encoding.

Melick, et al.

Attorney Docket No. P04409US01

Claim 50 (New): The method of claim 47 further comprising:
receiving the transmission pulse from the transmission medium; and
transforming the transmission pulse into a digital bits of data corresponding to the position of the
transmission pulse.

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Claim 51 (New): A method of transmitting data over the transmission medium, the method
comprising:
receiving first digital bits of data from a memory unit;
receiving second digital bits of data from a memory unit;
receiving third digital bits of data from a memory unit;
transforming the first bits of data into a transmission pulse of electrical energy, the transmission
pulse having a first pulse position selected from a set of three or more predetermined
pulse positions, one of which is corresponding to the first bits of data;
transforming the third bits of data into a transmission pulse of electrical energy, the transmission
pulse having a third pulse position selected from a set of three or more predetermined
pulse positions, one of which is corresponding to the third bits of data;
determining the time of transmission for the second bit of data, the time of transmission having a
duration selected from a set of three or more predetermined durations, one of which is
corresponding to the second bits of data;
transmitting the first transmission pulse over a transmission medium;
postponing the transmission of the third transmission pulse by a time equal to the transmission
time for the second bits of data; and
transmitting the third transmission pulse over a transmission medium.

Claim 52 (New): The method of claim 51 wherein the transmission pulse positions
correspond to a number base higher than 2.

Claim 53 (New): The method of claim 51 wherein the duration between transmission pulses
correspond to a number base higher than 2.

Melick, et al.

Attorney Docket No. P04409US01

Claim 54 (New): The method of claim 51 wherein the transmission pulses represent data in the form of universal character coding.

Claim 55 (New): The method of claim 51 wherein the transmission time represents data in the form of universal character coding.

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Claim 56 (New): The method of claim 51 wherein the transmission time represents data in the form of meta data.

Claim 57 (New): A method of storing data on a transmission medium, the method comprising:
receiving data in a receiver, the data being in the form of a series of variable characteristic transmission pulses;
transmitting the variable characteristic transmission pulses from a transmitter over a transmission medium;
receiving the variable characteristic transmission pulses in the receiver; and
repeating the transmission of the variable characteristic pulses over the transmission medium in the direction of the receiver.